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EXAMINER	
WOODS, ERIC V	

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2672	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/626,163	VAN DER ZIJPP, ROBERT	
	Examiner	Art Unit	
	Eric V. Woods	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 April 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 1 of Remarks, filed 20 April 2005, with respect to the rejections under 35 U.S.C 101 and 35 U.S.C. 102(b) have been fully considered and are persuasive. All rejections of claims in the instant application under 35 U.S.C. 101 and 102(b) stand withdrawn due to applicant's amendments to correct the deficiencies.

Applicant's amendments corrected the informalities in claims 2 and 3 cited previously; thusly, the objections to those claims stand withdrawn.

Applicant's amendments corrected the deficiencies in regards to the specification and those objections are thusly withdrawn.

The new drawings correct all cited deficiencies and, therefore, all objections to the drawings are withdrawn.

2. Applicant's arguments, see pages 2-4 of Remarks, filed 20 April 2005, with respect to the rejection(s) of claim(s) 1-13 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made as set forth below.

Drawings

3. Examiner accepts the drawings filed 20 April 2005.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude"

granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1 and 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 13 of U.S. Patent No. 5,638,156 in view of Atkinson and Silvers. The obviousness rejections under 35 U.S.C. 103(a) against claims 1 and 13 as set forth below are herein incorporated by reference and used against the instant claims, since the grounds are the same.

A computer implemented process for the creation of a merged image comprising the steps of: (Silvers 1:15-30)	A method of making a mosaic transparency of a plurality of independent images, each formed by spaced apart groups of a selected number of predetermined sized pixels interlaced with and spaced from one another to, in each group, form a common pattern with corresponding pixels of each said group correspondingly located and the pixels of each group disposed at selected points along a predetermined pixel path, said method including the steps of: (same effect as claims 1 and 13 of the instant application, where for example steps (b)-(e) in claim 1 perform the recitations of the preamble, and they are rejected as below under 35 U.S.C. 103 (as in, the rationale for that obviousness rejection and all citations are incorporated herein

by reference))

a. Preparing at least two base images in digital format; (Delhi teaches the use of multiple images, as in Figs. 1 and 2, and 1:3-30)(Silvers 1:15-30, specifically Figs. 1 and 2, and 3:4-30, where multiple source images are disclosed)	-Selecting a photosensitive film; (equivalent to step of operating a computer memory for the recited purpose (see the preamble and step (a) of the rejection to claim 1 below)
b. Selecting a pattern wherein said pattern comprises a multiplicity of cells, each cell having n regions wherein n is the number of prepared base images and wherein each region of a cell is assigned to a different prepared base image; (Delhi teaches in Fig. 1 the display of multiple shapes and types of pixels –e.g. the kind of pattern recited above. Further, in Figs. 12-15 the technique recited above by applicant is disclosed by Delhi.)(See Fig. 2 of Delhi and 4:5-25 where it is disclosed that the images are broken into cells having pixels, and how the pattern would be applied to base images.)	-Selecting an apparatus having a floating platen and a fixed mask overlaid thereon, said mask having transparent apertures in a predetermined pattern corresponding to said predetermined pixel path, said platen being coupled to a drive device to sequentially steer said platen through an orbital path having fixed indexed points corresponding to said predetermined pixel path for aligning said film relative to said mask; (steps (b) and (c) rejected as below)

c. Providing a merged image template separate from all of the base images wherein said template comprises a multiplicity of cells, each cell having n regions, wherein n is the number of prepared base images and wherein each region of a cell is assigned to a different prepared base image; (Delhi teaches this in the flowchart shown in Fig. 16, specifically, steps 306 – 312 repeated for each base image that the pattern needs to applied to exposed to create the final mosaic (e.g. see 9:34-67), and clearly Delhi teaches the recited template, which Atkinson would suggest would be separate anyway, and the system of Delhi so requires)(See Figs. 1 and 2 of Delhi and 4:5-25 where it is disclosed that the images are broken into cells having pixels, and how the pattern would be applied to base images.)(Delhi specifically teaches the use of the template in Fig. 1, where the system is obviously divided into a grid.)(Atkinson clearly teaches in the Abstract shows that in Fig. 1, the images manufactured in such way as set forth in Delhi are displayed in the recited apparatus, which has a grid layer interposed between the image transparency and the viewing window so as to allow light to come through each viewing element correctly that also serves to divide the image into various sections – 1:60-2:35, and further this teaches the idea that such images are divided into cells)

-Mounting said film fixedly to said platen in an interposed relationship between said platen and said mask; (step (c) as rejected below)

d. Applying the pattern to each base image to divide each base image into regions; (Delhi teaches this in the flowchart shown in Fig. 16, specifically, steps 306 – 312 repeated for each base image that the pattern needs to applied to exposed to create the final mosaic (e.g. see 9:34-67))(See Fig. 2 of Delhi and 4:5-25 where it is disclosed that the images are broken into cells having pixels, and how the pattern would be applied to base images.)	-Moving said platen sequentially through said orbital path to each of said selected index points and stopping said platen sequentially thereat; (steps (d) and (e))
e. Selecting a mergable portion of each respective base image wherein the mergable portion corresponds to each region of each cell assigned to the respective base image; (Delhi teaches this in the flowchart shown in Fig. 16, specifically, steps 306 – 312 repeated for each base image that the pattern needs to applied to exposed to create the final mosaic (e.g. see 9:34-67). The final step of the merging is completed as shown in step 314.))	-Selecting a subject image to be reproduced at each said index point and projecting exposure light from a light source upon said image, through said apertures in said mask to expose a plurality of corresponding pixels on said film; and (steps (d), (e), and (f))

f. Merging of only the selected mergable portions of each respective base image into the merged image template to provide a single layer merged image. (Delhi teaches this in the flowchart shown in Fig. 16, specifically, steps 306 – 312 repeated for each base image that the pattern needs to applied to exposed to create the final mosaic (e.g. see 9:34-67). The final step of the merging is completed as shown in step 314.) In any case, the system of Delhi produces a final, end transparency that has only one layer, and ideally no overlap of the images would be required, but is necessary to prevent misregistration or misalignment of the images and 'empty areas' because of the nature of the mechanical system. Clearly the template is in grid style, as both Atkinson points at and as the specification of Delhi shows, although the grid cells may slightly overlap for the reasons discussed above.)(Silvers Fig. 2, final resulting edited mosaic image 26)	-Removing and developing said exposed film upon completion of said predetermined orbital path (equivalent to step (f) as performed by the computer).

The claim is rejected as set forth immediately ab with the correspondence between each step thusly explained as below, and equivalent steps pointed out above. Claim 13 is merely claim 1 with an additional limitation, and that limitation is discussed in the left hand column. The reasons for obviousness are as set forth in the rejection of the instant claims under 35 U.S.C. 103(a) as set forth immediately below, which have been incorporated by reference.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.**

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dehli I (US 5,638,156) in view of Atkinson et al (US 4,897,802) in view of Silvers (US 6,137,498 A).

Silvers clearly teaches the motivation for using a computer for image processing applications (1:15-30) and demonstrates that such is well known; Silvers is being used as a teaching reference.

9. As to claim 1,

A computer implemented process for the creation of a merged image comprising the steps of: (Silvers 1:15-30)

a. Preparing at least two base images in digital format; (Delhi teaches the use of multiple images, as in Figs. 1 and 2, and 1:3-30)(Silvers 1:15-30,

specifically Figs. 1 and 2, and 3:4-30, where multiple source images are disclosed)

b. Selecting a pattern wherein said pattern comprises a multiplicity of cells, each cell having n regions wherein n is the number of prepared base images and wherein each region of a cell is assigned to a different prepared base image; (Delhi teaches in Fig. 1 the display of multiple shapes and types of pixels –e.g. the kind of pattern recited above. Further, in Figs. 12-15 the technique recited above by applicant is disclosed by Delhi.)(See Fig. 2 of Delhi and 4:5-25 where it is disclosed that the images are broken into cells having pixels, and how the pattern would be applied to base images.)

c. Providing a merged image template separate from all of the base images wherein said template comprises a multiplicity of cells, each cell having n regions, wherein n is the number of prepared base images and wherein each region of a cell is assigned to a different prepared base image; (Delhi teaches this in the flowchart shown in Fig. 16, specifically, steps 306 – 312 repeated for each base image that the pattern needs to applied to exposed to create the final mosaic (e.g. see 9:34-67), and clearly Delhi teaches the recited template, which Atkinson would suggest would be separate anyway, and the system of Delhi so requires)(See Figs. 1 and 2 of Delhi and 4:5-25 where it is disclosed that the images are broken into cells having pixels, and how the pattern would be applied to base images.)(Delhi specifically teaches the use of the template in Fig. 1, where the system is obviously divided into a grid.)(Atkinson clearly teaches in the Abstract shows that in Fig. 1, the images manufactured in such way as set forth

in Delhi are displayed in the recited apparatus, which has a grid layer interposed between the image transparency and the viewing window so as to allow light to come through each viewing element correctly that also serves to divide the image into various sections – 1:60-2:35, and further this teaches the idea that such images are divided into cells)

d. Applying the pattern to each base image to divide each base image into regions; (Delhi teaches this in the flowchart shown in Fig. 16, specifically, steps 306 – 312 repeated for each base image that the pattern needs to applied to exposed to create the final mosaic (e.g. see 9:34-67))(See Fig. 2 of Delhi and 4:5-25 where it is disclosed that the images are broken into cells having pixels, and how the pattern would be applied to base images.)

e. Selecting a mergable portion of each respective base image wherein the mergable portion corresponds to each region of each cell assigned to the respective base image; (Delhi teaches this in the flowchart shown in Fig. 16, specifically, steps 306 – 312 repeated for each base image that the pattern needs to applied to exposed to create the final mosaic (e.g. see 9:34-67). The final step of the merging is completed as shown in step 314.))

f. Merging of only the selected mergable portions of each respective base image into the merged image template to provide a single layer merged image. (Delhi teaches this in the flowchart shown in Fig. 16, specifically, steps 306 – 312 repeated for each base image that the pattern needs to applied to exposed to create the final mosaic (e.g. see 9:34-67). The final step of the merging is completed as shown in step 314.) In any case, the system of Delhi produces a

final, end transparency that has only one layer, and ideally no overlap of the images would be required, but is necessary to prevent misregistration or misalignment of the images and 'empty areas' because of the nature of the mechanical system. Clearly the template is in grid style, as both Atkinson points at and as the specification of Delhi shows, although the grid cells may slightly overlap for the reasons discussed above.)(Silvers Fig. 2, final resulting edited mosaic image 26)

As set forth above, Delhi teaches a process for merging images using a mechanical fixture that produces comparable results to the process in the instant application. It is important to note for later discussions that the assignees of the instant application and of the Delhi and Atkinson patents are the same (AdMotion and its various subsidiaries in various countries). The Atkinson patent teaches that when the images are actually displayed, that there is a grid mask interposed between the transparency and the viewing window where the advertisement is display as set forth above (6:1-50 and many other locations within the Atkinson patent), which would clearly constitute something separate from the base image, and Delhi sets forth the same idea. Clearly, although Atkinson was filed earlier and is silent about the precise manufacture of such mosaic images, the grid would be used in their fabrication since it certainly is required in their display. Note that Atkinson is being used for the **idea** of applying the gridded pattern and as additional justification. The fixture of Atkinson is meant to display the resulting images produced by Delhi, so they are complementary. Applicant is not permitted the argument that a combination is impermissible for this reason, as it

is quite clearly from similar figures and specifications between these two patents that they are comparable, and further they share the same assignee. The combination is appropriate for that reason alone, and also that Delhi made easier a portion of the task of generating the mosaics for the image display fixtures of Atkinson as set forth above, and further that it would have been obvious to one of ordinary skill in the art to combine them, and that such is well-known in the art, and finally that it would be inherent and intrinsic to the knowledge and skill of one of ordinary skill in the art. Combining the above with Delhi would be obvious because Delhi was later filed and is representative of the level of ordinary skill in the art, and it would be obvious to use a computer for generating image mosaics for all the reasons set forth below, not to mention that computers are simply faster and do not require image overlap as does Delhi, as it is a computer and not subject to the mechanical limitations of that system.

Now, one of ordinary skill in the art at the time the invention was made (e.g. at the date of filing of the instant application) would be cognizant of the tools available to one in the field. Now, while even a few years ago (1995, the date of the filing of the Delhi patent) computers were still very slow (e.g. the Pentium® Pro from Intel™ ran at approximately 100MHz and was state of the art at the time) and did not have much in the way of image processing capabilities (outside of exceptionally expensive, purpose-built systems from SGI (Octane, O2, Indigo)) whereas at the time of filing of the instant application (even using the Australian filing date of 10/31/2002) computers were much faster and general purpose (Intel's Pentium IV, Xeon, and Itanium chips were available; average speed of a

Pentium IV as of that date was approximately 2GHz (on the old core), as were comparable speeds for the Itanium 2, for example) – so comparatively, the computer speeds were approximately 20X faster, not to mention speed-ups from memory, RAM, operating systems, and advances in processor architecture. As such, the concept of the Delhi patent – creating mosaic images for advertising using multiple source images and applying a template to it – was done in the best mode available at the time that had a reasonable cost – e.g. a mechanical solution.

That being said, one now turns to the art of image mosaics generally to consider the effects of technology in the intervening years. One of ordinary skill in the art would be cognizant of the evolution of the art and the tools used therein. Several seminal works in the field were patented over the course of time from the filing of the instant application and the Delhi patent, such as the Silvers patent (US 6,137,498 A), which reveals a technique for digital compositing a plurality of source images to form a single, composite larger image, where each source image is subdivided into some smaller units and appropriate smaller units are chosen to fill in pixel blocks in the larger image; various patents by DeLeeuw et al (for example, US 6,088,018 ('DeLeeuw I'), which reveals a method of blending a second image into a first using various techniques, including alternating pixels for blending and other formats; US 6,359,631 B2, which reveals greater support for transparency and other variations of the DeLeeuw I patent; US 6,532,312 to Corkran, which teaches the idea of a virtual quilt, e.g. an image mosaic composed of various images submitted by varying individuals; and many

others. The Canon research group resident in Australia did some interesting work in the art, with a prime example being US 6,476,809 B1 to Browne et al, where circular photo-mosaics are discussed. Finally, Szeliski et al (US 6,147,747 A) reveals a mosaic system that performs image warping.

Now, all of that having been said, under *Graham v. Deere*, the first criteria (determining the scope and contents of the prior art) has been met, as the relevant pieces of the prior art have been pointed out.

The difference between the prior art and the claims at issue is instantly manifest and largely confined to one issue: the Delhi reference is mechanical, while the claims at issue are computer-implemented.

Examiner now pauses to examine and disprove a spurious argument by applicant. Applicant attempts to differentiate the present invention from the Delhi reference (see for example the middle paragraph of page 3 of Remarks) by presenting the argument that Delhi is directed to correcting white flash with a response of having the images overlap slightly to correct misregistration and alignment problems inherently present with a mechanical solution.

The specification of the instant application expressly states that it is directed to overcoming 'white flash' – see paragraph [0020], which states *inter alia*, "The addition of this layer may prevent white flash and/or increase the alignment error margin ..." with respect to step (c) of the above recited method, where such a template is separate from the base images, e.g. a grid with cells as described in both Atkinson and Delhi, where Delhi clearly uses the fixture with its

template to expose only the desired portions of each base image to the film. Clearly, this contravenes applicant's arguments concerning white flash above.

To return to the issue at hand, *Graham* requires that the next step is that the examiner resolves the level of ordinary skill in the art at the time the invention was made. Examiner turns to the above-cited prior art and the requisite filing, publication, and issue dates, which are substantially before October 2002 in almost all cases, which clearly establishes that the level of ordinary skill in the art of image mosaics clearly encompassed the use of computer software, and a survey of another few dozen of the patents issued over the 1995-2002 time period does not locate any references that generate mosaics mechanically; even the published applications by Maier (US PGPub 2002/0154143 A1 for example) use a computer to generate a mosaic image for making a wooden product, where each element in the mosaic is then defined to be a certain type of wood based on color, and other details.

Silvers clearly teaches the motivation for using a computer for image processing applications (1:15-30) and demonstrates that such is well known; Silvers is being used as a teaching reference.

There has been no evidence provided by applicant concerning the obviousness or nonobviousness of the claimed invention besides that presented in the originally filed specification. No explicit evidence appears to be present therein, except the assertion that implementing such methods on a computer is non-obvious and novel.

While applicant (correctly) argued that citation of *In re Venner* in the previous Office Action was inapposite for an improper combination of references, the citation is correctly used herein.

Finally, Delhi clearly establishes that overlap is necessary because of the limitations of mechanical systems, as pointed out above. Clearly, with a computer, such concerns are not present, and it would be obvious that no overlap was necessary for that reason, and to apply the grid mask precisely.

Also, it is trivially well known in the art of image editing software to perform image editing in layers (e.g. Photoshop – see Silvers 2:40-50 for example). Applicant's invention would be trivially generated by simply a few layers in Photoshop where there would be a first layer, a mask where each cell would block 75% of the pixels, and then a second, and so on. This would be trivially obvious to one of ordinary skill in the art, and examiner takes Official Notice on this point (that using layers and alpha masks this method could be performed in an exceptionally short period of time). See any major reference on Photoshop for this.

The core of examiner's argument is simply that applicant's invention is an automated means of performing a manual task, e.g. the process of Delhi as set forth above. Examiner has shown under the *Graham v. Deere* requirements why this is the case, where the level of ordinary skill in the art is such that it would be obvious to anyone having possession of the Delhi and Atkinson references and of ordinary skill in the art that the use of a computer would be obvious and necessary, and that to perform the steps of the Delhi reference in combination

with Atkinson using a computer at the time the invention was made would be an obvious modification for the reasons set forth above. Clearly, the source images would be digital rather than film or photographs, and the merging would be digital rather than mechanical using a program such as Adobe Photoshop or another application. However, as set forth above, applicant is trying to automate a manual process, and thusly it is simply is not patentable.

Finally, in response to applicant's arguments in the previous application and in anticipation of similar arguments in this case that the combination would destroy the function of the references, applicant is mistaken. First of all, the Silvers reference is only relied upon for the fact that it teaches image mosaics on a computer and a method of making them as set forth above. Next, clearly software can be constructed into any arbitrary subdivisions, e.g. it would have been obvious to one of ordinary skill in the art to have the user able to choose between using either the method of Silvers or of Delhi depending on the desired end result if applicant argues that a literal combination is required under the law. Examiner is only using Silvers for a teaching reference and is NOT relying on Silvers as a formal or literal combination reference per se, although examiner points out relevant portions in response to dependent claims.

10. As to claim 2,

A process as claimed according to claim 1 wherein the number of regions of each cell of respective base image affected by the application of the pattern is related to the number of base images to be merged.

Reference Silvers implicitly teaches this limitation as discussed above in the rejection for claim 1. Reference Delhi explicitly teaches this claim, as shown in Figs. 12-15, and the mapping of the various cells and their shapes (Fig. 1) to the overall sign. Further, Delhi teaches in claim 13 that a 'plurality' of images can be used (12:50-60), and the number of cells (four) is obviously related to the number of quadrants used (four) by inherent definition of the word quadrant (or four). Since Delhi further teaches that (10:1-25) that various other forms and numbers of cells are possible it would have been obvious to have different combinations of cells. Further, under In re Venner, 120 USPQ 192 (CCPA 1958), "...it is not 'invention' to broadly provide a ... automatic means to replace manual activity which has accomplished the same result." Motivation and combination are incorporated from the rejection to the parent claim.

11. As to claim 3,

A process as claimed according to claim 2, wherein the number of base images to be merged is *n*, and the number of regions of each cell of respective base image affected by the application of the pattern is *n-1*.

Delhi explicitly teaches this limitation in Figs. 12-15, where it is clear that 3 cells of the mosaic images are being blocked to allow one cell to be shown, so that when the mosaic image is formed, three (n-1) of four (n) cells are rendered opaque or blocked, as shown, again in the flowchart listed in Fig. 16 and the reference specification in claim 2. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the overlay of Silvers with the overlay pattern generation of Delhi, which would allow the

display of multiple images on the monitor besides the OS environment. Further, under In re Venner, 120 USPQ 192 (CCPA 1958), "...it is not 'invention' to broadly provide a ... automatic means to replace manual activity which has accomplished the same result." Motivation and combination are incorporated from the rejection to the parent claim.

12. As to claim 4, Silvers teaches this limitation, since Silvers is software and clearly uses a computer with one processor (Workstation 20 in Fig. 1). Motivation and combination are incorporated from the rejection to the parent claim.

13. As to claim 5, Silvers clearly teaches a grid in the pictures (4:60-67), and Delhi clearly teaches grids in Fig. 1, and Atkinson shows such a grid in Fig. 1 as well, and discusses it in the abstract and in 1:4-2:25. Motivation and combination are incorporated from the rejection to the parent claim.

14. As to claim 6,

A process as claimed according to claim 5 wherein each base image has a grid applied to it digitally, to divide the base image into a multiplicity of cells and each cell into a multiplicity of regions.

Reference Silvers clearly segments the original images – see Fig. 2 and 3:4-30, this clearly establishes that the images are being subdivided so that they may merged into the overall mosaic later. Further, Delhi teaches this method – Fig. 2 shows clearly that images are divided into cells that are repeated, as applicant claims, and that each cell is broken into pixels / regions (4:1-25). Therefore, it would be trivially obvious to modify the apparatus of Silvers to

perform the method of Delhi, since the base image is divided into pixels (regions, cells, etc.) and stored digitally anyway. Motivation and combination are incorporated from the rejection to the parent claim.

15. As to claim 7,

A process as claimed according to claim 6 wherein the dimension of the grid are determined relative to a dimension of either a base image or a dimension of the merged image which is required by a user.

This would be a trivial and *prima facie* modification of the methods of Delhi and Silvers. Clearly, as shown in Fig. 2 of Delhi, the images can be broken down into cells and further into pixels. However, if the cells of each image could have n=4 pixels and each region could have n=1 pixel, then just as obviously each cell could have n=16 (total number of pixels shown in Fig. 2) with each region consisting of n=4 pixels. Silvers teaches that base images are combined to form a final output picture, and in 3:4-25 it is recited that the source images are broken down into blocks of different sizes in 3:30-65, where the sub-region resolution can be specified by the user, e.g. 8x8 pixel blocks. Finally, these all relate to the grid sizing – and for larger images, obviously a larger grid size would work just as well – such a grid size could obviously simply be scaled in proportion to the image it was applied (meeting the base image requirement limitation recited in the above claim). Motivation and combination are incorporated from the rejection to the parent claim.

16. As to claim 8,

A process as claimed according to claim 6 wherein the cells and regions into which the grid divides each base image are sized according to a dimension of either the base image or the merged image which is required by a user.

See the above rejection of claim 7. This claim is a trivial modification thereof, wherein the only difference is that the grid resizes the cells and regions, whereas in claim 7 the grid itself is being resized. The motivation and combination of claim 7 are adopted herein by reference without further comment being required.

17. As to claim 9,

A process as claimed according to claim 6, wherein the cells and regions have a particular shape chosen to achieve or maintain high tolerance with regard to pixel or cells and region spacing.

Reference Delhi teaches (9:26-32) that high tolerance with regards to pixel spacing is important. Delhi further teaches that streaks are to be avoided in creating these mosaic images (9:18-29), and various shapes are shown in Fig. 1 where spacing is clearly important. Also, it is a fundamental of the art and geometry that the use of square or rectangular pixels maximizes the spacing (e.g. leaves no empty space), which is usually the goal of a display (to get maximum resolution on it). Further, cells are taught to have different shapes by Delhi (10:1-25). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the digital image displays of Silvers with the differently shaped cells and high space tolerance of Delhi, as Silvers uses mosaics with no overlap, and with such techniques, it would be

essential that high tolerance of pixel spacing be achieved as taught by Delhi – and provides additional motivation for performing the step on a computer, where the overlap would not be necessary because of the nature of digital image processing on a computer. The motivation and combination of claim 6 are adopted herein by reference without further comment being required.

18. As to claim 10,

A process as claimed according to claim 6 wherein one or more of the base images are divided into differently shaped cells and regions.

Delhi explicitly teaches this limitation, teaching hexagonal, elliptical, and other shapes of pixels / regions (10:1-25). It would trivially obvious to modify the digital displays of Silvers to use the differently shaped pixels / interleaving patterns of Delhi. The motivation and combination of claim 6 are adopted herein by reference without further comment being required.

19. As to claim 11,

A process as claimed according to claim 1 wherein the application of the pattern to each of the base images is such that when the selected mergable portions of each image are combined to form the merged image, the mergable portions of each image are positioned at a predetermined spacing in relation to each other.

See the rejections for claims 5 and 6; the grid applied there, along with the regularly spaced cells and regions, clearly meets the limitations recited herein. The rejections of the above mentioned claims (particularly claim 5) are adopted with their combination and motivation herein by reference without further comment.

20. As to claim 12,

A process as claimed according to claim 1 wherein the selected mergable portions of each base image are merged digitally to form a single image layer.

Reference Silvers teaches this limitations when it passes a final image to the editing computer, as that is one digital file, e.g. only one image layer. Further, when data in a frame buffer (fundamental to a display) is sent to the display, the data has *prima facie* obviously been merged (this is a fundamental of the art). The motivation and combination, if necessary, of the parent claim are hereby incorporated by reference without further comment.

21. Claim 13 is rejected under 35 U.S.C. 103(a) as unpatentable over Delhi in view of Atkinson and Silvers, and further in view of DeLeeuw I.

As to claim 13,

A process as claimed according to claim 12 wherein at least one additional layer is added to the single layer image, the entire additional layer being digitally transparent except for advertising material such as trademarks and other digital information, for example Vernier scales, calibration scales, or image borders.

Reference Atkinson teaches the use of a grid, which would prima facie be transparent except for the grid lines dividing the cells for the light sources as specified therein.

Reference DeLeeuw I clearly teaches the use of digitally transparent layers, as shown in Fig. 2, where it is disclosed that a clock and stock ticker are overlaid onto the normal screen, but in a transparent fashion (the stock ticker and clock could obviously be advertising)(4:15-35, transparent layer). Reference

Delhi clearly teaches use of mosaics for advertising (1:10-40). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the transparent digital layers of DeLeeuw I with the mosaic techniques of Delhi, as DeLeeuw uses transparent layers and digital processing (*prima facie* digitally transparent) techniques, and with such techniques and the varying interleaving patterns allowed, it would be obvious to use advertising for such a technique. Motivation for combination with the other references is taken from the rejection to claim 1. Further, DeLeeuw is only relied upon for that one particular detail, and thus arguments that such a combination would destroy the function of one reference are not valid, since all references – Silvers and DeLeeuw anyway – are software and software can be made of modules that have arbitrary functionality, so it would be obvious to take only the module performing that function and move it to the combination as set forth above.

22. Claim 14 is rejected under 35 U.S.C. 103(a) as unpatentable over Delhi in further view of Silvers and Atkinson as applied to claim 1 above, and Yokomizo et al (US PGPub 2002/0067500 A1)('Yokomizo') and Morris (US PGPub 2003/0200268 A1)('Morris').

As to claim 14,

A computer network based process comprising the steps of:

A. At least one end user supplying at least two base images to an image interrogation means; (Yokomizo 0014-0015 and 0048; Morris 0004-0008 and 0010-0011)

B. The image interrogation means checking the base images for suitability and size; (Yokomizo 0030; Silvers teaches checking the source images and segmenting them as set forth in various earlier claims.)

C. Implementing the computer implemented process according to claim 1; and (clearly the rejection to claim 1 sets this limitation forth adequately)

D. Forwarding the merged image to the end user. (Yokomizo Fig. 1, which clearly illustrates that images are processed on the remote server representing the dealer's head office, e.g. element 9. See also Morris 0018-0021)

The parent references (from claim 1) do not expressly teach these limitations. The system of Yokomizo involves having the images from digital photographs stored on a remote server, and the user downloads a small version of the high-resolution image, performs operations on it, and sends the results back to the server, where the server actually performs the desired operations (clips, cuts, rotations, scaling, zooming, image extraction, matte and color correction, sharpening, red eye processing, etc. [0030]) on the high-resolution version. Reference Morris provides a means for users to store their images remotely on a server and share them with other people, including emailing them. The system of Yokomizo [0048] can also provide files after the image processing done remotely [0050] by CD, floppy, etc., and could just as easily be emailed out as the system of Morris does. The only constraint on the Yokomizo system is bandwidth, so with high bandwidth available (e.g. cable modem, DSL, etc.) using the remote server for near real-time image processing applications becomes feasible. Using the technologies of Morris would allow the results to be sent back

to the user via email or a website and allow the user to share their work with others. Further, the system or software of DeLeeuw automatically formats video images at the operating system or video card level so that it will fit in the frame buffer and reformats it automatically if necessary. Since the high-resolution images are / would be processed remotely, obviously they would be scanned (Yokomizo) and validated beforehand, but it would be an obvious modification if sufficient bandwidth were available to do the image validation on the remote server upon upload using either the logic behind why it would be done in the first place at scan time of Yokomizo or the automatic formatting of Silvers.

Reference Delhi teaches the use of processed mosaic images in advertising. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the video mosaics and overlays of Silvers and Atkinson and Delhi with the image processing systems of Morris and Yokomizo, since after mosaic images were rendered, they could be sent back to the end user for review, which would happen using the photo-sharing technology of Morris or email.

Further, Silvers teaches that the merged images are then sent to an editing workstation, which could clearly utilize the system of Morris for doing so.

23. Claims 15-16 are rejected under 35 U.S.C. 103(a) as unpatentable over Delhi in view of Silvers and Atkinson as applied to claim 1, in further view of Yokomizo and Morris as applied to claim 14, and further in view of Kimura et al (US PGPub 2003/0025933 A1)('Kimura').

24. As to claim 15,

A computer network based process as claimed according to claim 14 wherein the base images are forwarded to an interrogation means which then forwards the base images to a third party for the application of the process for the creation of the merged digital image.

References Silvers, Atkinson, Delhi, and Morris do not explicitly teach this limitation. Reference Yokomizo implicitly teaches this limitation, where the user brings their photographs to the dealer branch shops (Fig. 1) and the dealer then scans them and sends them to the dealer head shop. Obviously, such dealer shops could be franchises that were independently owned, and the dealer head shop would be an effective third party, and users could upload pictures to the dealer shops rather than physically bringing them in.

Reference Kimura explicitly teaches this limitation, wherein in 0019-0021 and Fig. 4 Kimura teaches that users can observe an image that they want, download a thumbnail, place an order for said image (taken from, for example, a sporting event by a TV station or professional photographer), pay for said image, and then send it to a "photo finishing" location where it will processed as they desire (e.g. zoomed in, blown up, rotated, scaled, cropped, etc.) and the final product sent to them (obviously, it could be downloaded [0089] or sent to them via mail or email (see technology of Morris)). This fulfills the recited limitation, where the interrogation means, etc., are the combined servers of Morris and Yokomizo as discussed in the rejection to claim 14, and thusly the images would be sent to the third party (the photo finisher) to perform the processing of Delhi and DeLeeuw as recited in the above claim.

Reference Delhi teaches the use of processed mosaic images in advertising. It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the video mosaics and overlays of DeLeeuw and Delhi with the image processing systems of Morris and Yokomizo, since if a public video terminal were equipped with the software of Delhi, Atkinson, and Silvers as taught in claim 1, since mosaic images that were rendered and then sent back to the end user for review, which would happen using the photo-sharing technology of Morris or email, and further the use of the technology of Kimura would allow an advertiser or user to download a picture of a famous event or person (e.g. an athlete), add that image to an advertisement or simply a public display after the end results of the processing operations performed by a third party were complete and the image was returned via the technology of Morris or Yokomizo.

25. As to claim 16,

A computer network based process as claimed according to claim 14 wherein the third party is able to control the quality of the merged images produced.

References Delhi, Atkinson, Silvers, Morris, and Yokomizo do not explicitly teach this limitation. Reference Kimura teaches that the third party performs image enhancement or resolution conversion [0032], which *prima facie* meets the recited limitations of the above claim. The technology would allow for the systems of the above four references to be used more efficiently and allow the user to have the desired image processed in different ways to achieve a more

aesthetically pleasing end result. The motivation and combination of claim 15 is hereby incorporated via reference without further comment.

26. Claims 17-19 are rejected under 35 U.S.C. 103(a) as unpatentable over Delhi in view of Atkinson and Silvers, Morris, Yokomizo, and Kimura as applied to claim 16 above, and further in view of Ginter et al (US PGPub 2004/0054630 A1)('Ginter').

27. As to claim 17,

A computer network based process as claimed according to claim 15, wherein the third party is a licensor of the process for the creation of the merged digital image and selectively control access and use of the process through license agreements with at least one licensee.

References Delhi, Atkinson, and Silvers, Morris, and Yokomizo do not explicitly teach this limitation. Reference Kimura implicitly teaches this limitation, in that the third party controls access to the process, but does not teach intellectual property specifically licensed as a process (e.g. the images themselves are controlled, and the higher resolution versions). Reference Ginter teaches licensing of intellectual property with licensees (see, for example, 0010 and 0023), where intellectual property is defined to include software (0007) that could execute the processes of DeLeeuw and Delhi, and that license agreements control access to content and functionality (0015-0026, various types of entities that would subscribe to such functionality, how it can be applied to almost any circumstance, etc.) In 0630 Ginter discloses the specific use of DRM / VRE software to control the actions of a licensee, including enforcing audit procedures

required for a licensee, etc. Clearly, the process of Ginter could be applied to any kind of information services provided over networks, etc, as in the combination of the systems of Morris and Yokomizo as covered in the rejections to claims 14 and 16, and the business model would be obvious, as this is taught by Ginter, and is only an obvious extension of what was rejected under claim 16 above, which rejection is hereby incorporated by reference in its entirety. Finally, Ginter clearly establishes that users pay royalties / license payments for use of content because of the VRE software – e.g. 0200 and 1821.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the processes of Delhi and DeLeeuw with the systems of Morris and Yokomizo for delivery and transmission purposes, along with the content management structures and business methods of Ginter and Kimura (the motivation and combination from claim 16 is hereby incorporated by reference), as the addition of the electronic rights protection and management as well as the business models of Ginter to those of Kimura would enable the third party to control the use and access to such material with the protective attributes of the VRE software, which would enhance the protection given to such images (and processes) via the system of Kimura.

28. As to claim 18,

A computer network based process as claimed according to claim 17 wherein according to the license agreement, the third party/licensor collects income in the form of license or royalty payments from licensees, according to predetermined parameters of the base images or merged images. [First 4 references do not

explicitly teach these limitations (e.g. Delhi, Silvers, and Atkinson, Morris, and Yokomizo).]

Clearly, as discussed in the rejection to claim 16 above, the third party does collect income from the user or individual who submitted the images to be processed under the system of Kimura. As taught in Ginter and discussed in the above rejection to claim 17, license payments and royalties are paid out on use of content as per license agreements as covered 0015-0025. Ginter teaches predetermined parameters or the payment for aspects thereof in (0161, 0211, 1912, 1936) for content, which would *prima facie* include images. Therefore, all the limitations are met as recited above. The motivation and combination of the parent claim are hereby incorporated via reference in their entirety.

29. As to claim 19,

A computer network based process as claimed according to claim 17 wherein the third party / licensor is able to accurately track individual merged images and the quantity of base images and/or merged images output for a particular operator/licensee. [First 4 references do not explicitly teach these limitations (e.g. Delhi, Atkinson, Silvers, Morris, and Yokomizo).]

Clearly, as discussed in the rejection to claims 16 and 17 above, particularly that of claim 16, reference Kimura teaches that for the user to get anything other than a thumbnail version of the image, they have to compensate the copyright owner, which would fulfill the recited limitations, since every use of the content would have to be paid for and pass through an external server for validation (e.g. the services of Morris and Yokomizo). Further, Ginter clearly

teaches the ability to track the number of uses of an object (0404-0411) [tracking quantity of base images input would be *prima facie* obvious and a trivial modification, as it would simply require counting the number of files submitted to the licensee for processing per run of the process for generating the mosaics]. Further, in 0404-0411 Ginter teaches the use of "meter" software that can monitor all the circumstances of use of a licensed piece of process, software, intellectual property, etc. that specifically meets all the limitations recited by applicant. The motivation and combination of claim 17 is hereby incorporated herein by reference in its entirety, in addition to the above-discussed motivation.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the processes of Delhi, Atkinson, and Silvers with the systems of Morris and Yokomizo for delivery and transmission purposes, along with the content management structures and business methods of Ginter and Kimura (the motivation and combination from claim 16 is hereby incorporated by reference), as the addition of the electronic rights protection and management as well as the business models of Ginter to those of Kimura would enable the third party to control the use and access to such material with the protective attributes of the VRE software, which would enhance the protection given to such images (and processes) via the system of Kimura.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**.

See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric V. Woods whose telephone number is 571-272-7775. The examiner can normally be reached on M-F 7:30-4:30 alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 571-272-7664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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June 8, 2005

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